

ABSTRACT

An integrated apparatus for optically monitoring semiconductor workpieces includes a supporting assembly for supporting the workpiece, and an optical monitoring unit positioned opposite the surface of the workpiece and separated therefrom by an optical window. The optical monitoring unit is mounted for reciprocating movement within a plane parallel to the window for monitoring at least one desired parameter of the semiconductor workpiece and has pattern recognition and auto-focusing utilities. The optical window includes one or more relatively small window fragments located at predetermined locations to enable observation of desired, predetermined portions of the workpiece. The size and shape of the window fragments are selected according to the requirements of transparency in a predetermined spectral range, mechanical strength and ability of pattern recognition and auto-focusing. A method of monitoring semiconductor workpieces through an optical window including one or more relatively small window fragments can be practiced with the integrated apparatus.